

SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Draw a neat sketch of structure and function of lipids.

Or

- (b) Explain in brief about metabolism of carbohydrates.

12. (a) Describe about the cell cycle.

Or

- (b) Give an account of DNA replication.

13. (a) Write about the gene mapping.

Or

- (b) Discuss in brief about independent assortment.

14. (a) Illustrate the biotic and abiotic interactions.

Or

- (b) Justify the global environmental change.

15. (a) Briefly explains about Darwin's theories.

Or

- (b) Summarize the molecular tools in phylogeny.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Explain in detailed about any two stabilizing interactions.

17. Describe the structural organization of intracellular organelles.

18. Elaborate account on human genetics.

19. Discuss about the Indian case studies on conservation.

20. Elaborate account on molecular evidences.



APRIL/MAY 2025

**23PEMB43C — LIFE SCIENCES FOR
COMPETITIVE EXAMINATIONS
(Elective VI)**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is micro-RNA?
2. Define Bioenergetics.
3. Define cell division.
4. What is meant by DNA repair mechanisms?
5. Define karyotyping.
6. Give any two examples of genetic disorder.
7. Define niche.
8. What is population growth curve?
9. What is meant by evolution?
10. Define Molecular clocks.

